



## SEQUENCE LISTING

<110> Murphy, Anne N.  
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<120> COMPOSITIONS AND METHODS FOR DETERMINING  
INTERACTIONS OF MITOCHONDRIAL COMPONENTS, AND FOR  
IDENTIFYING AGENTS THAT ALTER SUCH INTERACTIONS

<130> 660088.433C1

<140> US 09/709,785

<141> 2000-11-03

<160> 57

<170> FastSEQ for Windows Version 3.0

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<211> 894

<212> DNA

<213> Homo sapien

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<210> 8  
<211> 43  
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<210> 10  
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<220>  
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<210> 17  
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<400> 18  
aaatgataac catctcgc 18

<210> 19  
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<212> DNA  
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acttcaagga gaatttcc 18

<210> 20  
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 <212> DNA  
 <213> Homo sapien  
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 <222> (1)...(495)

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 ttg ggc cgc gtc tcc ttt gag ctg ttt gca gac aag gtc cca aag aca 96  
 Leu Gly Arg Val Ser Phe Glu Leu Phe Ala Asp Lys Val Pro Lys Thr  
 20 25 30  
 gca gaa aat ttt cgt gct ctg agc act gga gag aaa gga ttt ggt tat 144  
 Ala Glu Asn Phe Arg Ala Leu Ser Thr Gly Glu Lys Gly Phe Gly Tyr  
 35 40 45  
 aag ggt tcc tgc ttt cac aga att att cca ggg ttt atg tgt cag ggt 192  
 Lys Gly Ser Cys Phe His Arg Ile Ile Pro Gly Phe Met Cys Gln Gly  
 50 55 60  
 ggt gac ttc aca cgc cat aat ggc act ggt ggc aag tcc atc tat ggg 240  
 Gly Asp Phe Thr Arg His Asn Gly Thr Gly Gly Lys Ser Ile Tyr Gly  
 65 70 75 80  
 gag aaa ttt gaa gat gag aac ttc atc cta aag cat acg ggt cct ggc 288  
 Glu Lys Phe Glu Asp Glu Asn Phe Ile Leu Lys His Thr Gly Pro Gly  
 85 90 95  
 atc ttg tcc atg gca aat gct gga ccc aac aca aat ggt tcc cag ttt 336  
 Ile Leu Ser Met Ala Asn Ala Gly Pro Asn Thr Asn Gly Ser Gln Phe  
 100 105 110  
 ttc atc tgc act gcc aag act gag tgg ttg gat ggc aag cat gtg gtg 384  
 Phe Ile Cys Thr Ala Lys Thr Glu Trp Leu Asp Gly Lys His Val Val  
 115 120 125  
 ttt ggc aaa gtg aaa gaa ggc atg aat att gtg gag gcc atg gag cgc 432  
 Phe Gly Lys Val Lys Glu Gly Met Asn Ile Val Glu Ala Met Glu Arg  
 130 135 140  
 ttt ggg tcc agg aat ggc aag acc agc aag aag atc acc att gct gac 480  
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 145 150 155 160  
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<210> 27  
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 <212> PRT  
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Ala Glu Asn Phe Arg Ala Leu Ser Thr Gly Glu Lys Gly Phe Gly Tyr  
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 Lys Gly Ser Cys Phe His Arg Ile Ile Pro Gly Phe Met Cys Gln Gly  
                   50                  55                  60  
 Gly Asp Phe Thr Arg His Asn Gly Thr Gly Gly Lys Ser Ile Tyr Gly  
                   65                  70                  75                  80  
 Glu Lys Phe Glu Asp Glu Asn Phe Ile Leu Lys His Thr Gly Pro Gly  
                   85                  90                  95  
 Ile Leu Ser Met Ala Asn Ala Gly Pro Asn Thr Asn Gly Ser Gln Phe  
                   100                  105                  110  
 Phe Ile Cys Thr Ala Lys Thr Glu Trp Leu Asp Gly Lys His Val Val  
                   115                  120                  125  
 Phe Gly Lys Val Lys Glu Gly Met Asn Ile Val Glu Ala Met Glu Arg  
                   130                  135                  140  
 Phe Gly Ser Arg Asn Gly Lys Thr Ser Lys Lys Ile Thr Ile Ala Asp  
                   145                  150                  155                  160  
 Cys Gly Gln Leu Glu  
                                   165

<210> 28  
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<400> 28  
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42

<210> 29  
 <211> 42  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> PCR primer

<400> 29  
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42

<210> 30  
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 <213> Artificial Sequence

<220>  
 <223> Synthetic polypeptide

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<210> 31  
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 <213> Artificial Sequence

<220>  
 <223> Primer for PCR amplification of human ANT3 for  
 expression construct

<400> 31  
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<210> 32  
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 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Primer for PCR amplification of human ANT3 for  
 expression constructs

<400> 32  
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<210> 33  
 <211> 30  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Primer for PCR amplification of EYFP

<400> 33  
 gggcccctcg agatggtgag caagggcgag 30

<210> 34  
 <211> 33  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Primer for PCR amplification of EYFP

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<210> 35  
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<220>  
 <223> PCR primer

<400> 35  
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 <211> 35  
 <212> DNA  
 <213> Artificial Sequence

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&lt;223&gt; PCR Primer

&lt;400&gt; 36

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35

&lt;210&gt; 37

&lt;211&gt; 31

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; PCR Primer

&lt;400&gt; 37

ttaagatcc atggtcaacc ccaccgtgtt c

31

&lt;210&gt; 38

&lt;211&gt; 33

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; PCR primer

&lt;400&gt; 38

atatctcgag ttattcgagt tgtccacagt cag

33

&lt;210&gt; 39

&lt;211&gt; 624

&lt;212&gt; DNA

&lt;213&gt; Homo sapien

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)...(621)

&lt;400&gt; 39

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ccg	cgc	tcc	gtg	ccg	ctg	cgc	ctc	ccc	gcg	gcc	cgc	gcc	tgc	agc	aag	96
Pro	Arg	Ser	Val	Pro	Leu	Arg	Leu	Pro	Ala	Ala	Arg	Ala	Cys	Ser	Lys	
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ggc	tcc	ggc	gac	ccg	tcc	tct	tcc	tcc	tcc	tcc	ggg	aac	ccg	ctc	gtg	144
Gly	Ser	Gly	Asp	Pro	Ser	Ser	Ser	Ser	Ser	Ser	Gly	Asn	Pro	Leu	Val	
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tac	ctg	gac	gtg	gac	gcc	aac	ggg	aag	ccg	ctc	ggc	cgc	gtg	gtg	ctg	192
Tyr	Leu	Asp	Val	Asp	Ala	Asn	Gly	Lys	Pro	Leu	Gly	Arg	Val	Val	Leu	
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gag	ctg	aag	gca	gat	gtc	gtc	cca	aag	aca	gct	gag	aac	ttc	aga	gcc	240
Glu	Leu	Lys	Ala	Asp	Val	Val	Pro	Lys	Thr	Ala	Glu	Asn	Phe	Arg	Ala	

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ctg tgc act ggt gag aag ggc ttc ggc tac aaa ggc tcc acc ttc cac				288
Leu Cys Thr Gly Glu Lys Gly Phe Gly Tyr Lys Gly Ser Thr Phe His	85	90	95	
agg gtg atc cct tcc ttc atg tgc cag gcg ggc gac ttc acc aac cac				336
Arg Val Ile Pro Ser Phe Met Cys Gln Ala Gly Asp Phe Thr Asn His	100	105	110	
aat ggc aca ggc ggg aag tcc atc tac gga agc cgc ttt cct gac gag				384
Asn Gly Thr Gly Gly Lys Ser Ile Tyr Gly Ser Arg Phe Pro Asp Glu	115	120	125	
aac ttt aca ctg aag cac gtg ggg cca ggt gtc ctg tcc atg gct aat				432
Asn Phe Thr Leu Lys His Val Gly Pro Gly Val Leu Ser Met Ala Asn	130	135	140	
gct ggt cct aac acc aac ggc tcc cag ttc ttc atc tgc acc ata aag				480
Ala Gly Pro Asn Thr Asn Gly Ser Gln Phe Phe Ile Cys Thr Ile Lys	145	150	155	160
aca gac tgg ttg gat ggc aag cat gtt gtg ttc ggt cac gtc aaa gag				528
Thr Asp Trp Leu Asp Gly Lys His Val Val Phe Gly His Val Lys Glu	165	170	175	
ggc atg gac gtc gtg aag aaa ata gaa tct ttc ggc tct aag agt ggg				576
Gly Met Asp Val Val Lys Lys Ile Glu Ser Phe Gly Ser Lys Ser Gly	180	185	190	
agg aca tcc aag aag att gtc atc aca gac tgt ggc cag ttg agc				621
Arg Thr Ser Lys Lys Ile Val Ile Thr Asp Cys Gly Gln Leu Ser	195	200	205	
taa				624
<210> 40				
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<212> PRT				
<213> Homo sapien				

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			20					25					30		
Gly	Ser	Gly	Asp	Pro	Ser	Ser	Ser	Ser	Ser	Gly	Asn	Pro	Leu	Val	
		35					40				45				
Tyr	Leu	Asp	Val	Asp	Ala	Asn	Gly	Lys	Pro	Leu	Gly	Arg	Val	Val	Leu
		50				55					60				
Glu	Leu	Lys	Ala	Asp	Val	Val	Pro	Lys	Thr	Ala	Glu	Asn	Phe	Arg	Ala
65					70					75				80	
Leu	Cys	Thr	Gly	Glu	Lys	Gly	Phe	Gly	Tyr	Lys	Gly	Ser	Thr	Phe	His
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Arg	Val	Ile	Pro	Ser	Phe	Met	Cys	Gln	Ala	Gly	Asp	Phe	Thr	Asn	His
			100					105					110		
Asn	Gly	Thr	Gly	Gly	Lys	Ser	Ile	Tyr	Gly	Ser	Arg	Phe	Pro	Asp	Glu

	115					120					125								
Asn	Phe	Thr	Leu	Lys	His	Val	Gly	Pro	Gly	Val	Leu	Ser	Met	Ala	Asn				
	130						135					140							
Ala	Gly	Pro	Asn	Thr	Asn	Gly	Ser	Gln	Phe	Phe	Ile	Cys	Thr	Ile	Lys				
145						150					155				160				
Thr	Asp	Trp	Leu	Asp	Gly	Lys	His	Val	Val	Phe	Gly	His	Val	Lys	Glu				
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Gly	Met	Asp	Val	Val	Lys	Lys	Ile	Glu	Ser	Phe	Gly	Ser	Lys	Ser	Gly				
			180					185					190						
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<210> 42  
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<400> 42  
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<210> 43  
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<210> 44  
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<400> 44  
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<210> 45

<211> 36  
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<220>  
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<210> 46  
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<400> 46  
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32

<210> 47  
 <211> 297  
 <212> PRT  
 <213> Homo sapien

<400> 47  
 Met Gly Asp His Ala Trp Ser Phe Leu Lys Asp Phe Leu Ala Gly Ala  
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 Val Ala Ala Ala Val Ser Lys Thr Ala Val Ala Pro Ile Glu Arg Val  
 20 25 30  
 Lys Leu Leu Leu Gln Val Gln His Ala Ser Lys Gln Ile Ser Ala Glu  
 35 40 45  
 Lys Gln Tyr Lys Gly Ile Ile Asp Cys Val Val Arg Ile Pro Lys Glu  
 50 55 60  
 Gln Gly Phe Leu Ser Phe Trp Arg Gly Asn Leu Ala Asn Val Ile Arg  
 65 70 75 80  
 Tyr Phe Pro Thr Gln Ala Leu Asn Phe Ala Phe Lys Asp Lys Tyr Lys  
 85 90 95  
 Gln Leu Phe Leu Gly Gly Val Asp Arg His Lys Gln Phe Trp Arg Tyr  
 100 105 110  
 Phe Ala Gly Asn Leu Ala Ser Gly Gly Ala Ala Gly Ala Thr Ser Leu  
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 Cys Phe Val Tyr Pro Leu Asp Phe Ala Arg Thr Arg Leu Ala Ala Asp  
 130 135 140  
 Val Gly Arg Arg Ala Gln Arg Glu Phe His Gly Leu Gly Asp Cys Ile  
 145 150 155 160  
 Ile Lys Ile Phe Lys Ser Asp Gly Leu Arg Gly Leu Tyr Gln Gly Phe  
 165 170 175  
 Asn Val Ser Val Gln Gly Ile Ile Ile Tyr Arg Ala Ala Tyr Phe Gly  
 180 185 190  
 Val Tyr Asp Thr Ala Lys Gly Met Leu Pro Asp Pro Lys Asn Val His  
 195 200 205  
 Ile Phe Val Ser Trp Met Ile Ala Gln Ser Val Thr Ala Val Ala Gly  
 210 215 220  
 Leu Leu Ser Tyr Pro Phe Asp Thr Val Arg Arg Arg Met Met Met Gln  
 225 230 235 240

Ser	Gly	Arg	Lys	Gly	Ala	Asp	Ile	Met	Tyr	Thr	Gly	Thr	Val	Asp	Cys
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Trp	Arg	Lys	Ile	Ala	Lys	Asp	Glu	Gly	Ala	Lys	Ala	Phe	Phe	Lys	Gly
			260					265					270		
Ala	Trp	Ser	Asn	Val	Leu	Arg	Gly	Met	Gly	Gly	Ala	Phe	Val	Leu	Val
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	290					295									

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			20					25					30		
Lys	Leu	Leu	Leu	Gln	Val	Gln	His	Ala	Ser	Lys	Gln	Ile	Thr	Ala	Asp
		35				40						45			
Lys	Gln	Tyr	Lys	Gly	Ile	Ile	Asp	Cys	Val	Val	Arg	Ile	Pro	Lys	Glu
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Gln	Glu	Val	Leu	Ser	Phe	Trp	Arg	Gly	Asn	Leu	Ala	Asn	Val	Ile	Arg
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Tyr	Phe	Pro	Thr	Gln	Ala	Leu	Asn	Phe	Ala	Phe	Lys	Asp	Lys	Tyr	Lys
				85				90					95		
Gln	Ile	Phe	Leu	Gly	Gly	Val	Asp	Lys	Arg	Thr	Gln	Phe	Trp	Arg	Tyr
			100					105					110		
Phe	Ala	Gly	Asn	Leu	Ala	Ser	Gly	Gly	Ala	Ala	Gly	Ala	Thr	Ser	Leu
		115					120					125			
Cys	Phe	Val	Tyr	Pro	Leu	Asp	Phe	Ala	Arg	Thr	Arg	Leu	Ala	Ala	Asp
	130					135					140				
Val	Gly	Lys	Ala	Gly	Ala	Glu	Arg	Glu	Phe	Arg	Gly	Leu	Gly	Asp	Cys
145					150				155						160
Leu	Val	Lys	Ile	Tyr	Lys	Ser	Asp	Gly	Ile	Lys	Gly	Leu	Tyr	Gln	Gly
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Phe	Asn	Val	Ser	Val	Gln	Gly	Ile	Ile	Ile	Tyr	Arg	Ala	Ala	Tyr	Phe
			180				185						190		
Gly	Ile	Tyr	Asp	Thr	Ala	Lys	Gly	Met	Leu	Pro	Asp	Pro	Lys	Asn	Thr
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His	Ile	Val	Ile	Ser	Trp	Met	Ile	Ala	Gln	Thr	Val	Thr	Ala	Val	Ala
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Gly	Leu	Thr	Ser	Tyr	Pro	Phe	Asp	Thr	Val	Arg	Arg	Arg	Met	Met	Met
225					230					235					240
Gln	Ser	Gly	Arg	Lys	Gly	Thr	Asp	Ile	Met	Tyr	Thr	Gly	Thr	Leu	Asp
				245					250					255	
Cys	Trp	Arg	Lys	Ile	Ala	Arg	Asp	Glu	Gly	Gly	Lys	Ala	Phe	Phe	Lys
			260					265					270		
Gly	Ala	Trp	Ser	Asn	Val	Leu	Arg	Gly	Met	Gly	Gly	Ala	Phe	Val	Leu
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	290					295									

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<213> Homo sapien

<400> 49

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Lys	Leu	Leu 35	Leu	Gln	Val	Gln	His 40	Ala	Ser	Lys	Gln	Ile 45	Ala	Ala	Asp
Lys	Gln 50	Tyr	Lys	Gly	Ile	Val 55	Asp	Cys	Ile	Val	Arg 60	Ile	Pro	Lys	Glu
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Tyr	Phe	Pro	Thr	Gln 85	Ala	Leu	Asn	Phe 90	Ala	Phe	Lys	Asp	Lys 95	Tyr	Lys
Gln	Ile	Phe	Leu 100	Gly	Gly	Val	Asp	Lys 105	His	Thr	Gln	Phe 110	Trp	Arg	Tyr
Phe	Ala	Gly 115	Asn	Leu	Ala	Ser	Gly 120	Gly	Ala	Ala	Gly	Ala 125	Thr	Ser	Leu
Cys	Phe 130	Val	Tyr	Pro	Leu	Asp 135	Phe	Ala	Arg	Thr	Arg 140	Leu	Ala	Ala	Asp
Val 145	Gly	Lys	Ser	Gly	Thr 150	Glu	Arg	Glu	Phe	Arg 155	Gly	Leu	Gly	Asp	Cys
Leu	Val	Lys	Ile 165	Thr	Lys	Ser	Asp	Gly 170	Ile	Arg	Gly	Leu 175	Tyr	Gln	Gly
Phe	Ser	Val	Ser 180	Val	Gln	Gly	Ile 185	Ile	Ile	Tyr	Arg	Ala 190	Ala	Tyr	Phe
Gly	Val	Tyr 195	Asp	Thr	Ala	Lys	Gly 200	Met	Leu	Pro	Asp 205	Pro	Lys	Asn	Thr
His 210	Ile	Val	Val	Ser	Trp	Met 215	Ile	Ala	Gln	Thr	Val 220	Thr	Ala	Val	Ala
Gly 225	Val	Val	Ser	Tyr	Pro 230	Phe	Asp	Thr	Val	Arg 235	Arg	Arg	Met	Met	Met
Gln	Ser	Gly	Arg	Lys 245	Gly	Ala	Asp	Ile	Met 250	Tyr	Thr	Gly	Thr 255	Val	Asp
Cys	Trp	Arg	Lys 260	Ile	Phe	Arg	Asp	Glu 265	Gly	Gly	Lys	Ala 270	Phe	Phe	Lys
Gly	Ala	Trp 275	Ser	Asn	Val	Leu	Arg 280	Gly	Met	Gly	Gly	Ala 285	Phe	Val	Leu
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&lt;212&gt; PRT

<213> Artificial Sequence

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<212> PRT

<213> Homo sapien

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<212> PRT

<213> Homo sapien

<400> 52

Gly Ser Pro Gly Ile Leu  
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<210> 53

<211> 4

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<400> 53

Pro Ser Ser Ser  
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<212> PRT

<213> Homo sapien

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1 5

<210> 55

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<211> 8

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<213> Artificial Sequence

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<223> Epitope tag

<400> 56

Asp Leu Tyr Asp Asp Asp Asp Lys  
1 5

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